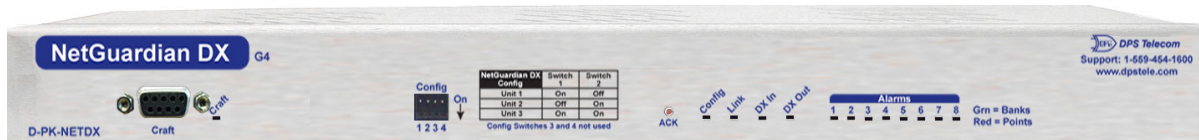


NetGuardian Discrete Expansion G4

USER MANUAL



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Revision History	
January 31, 2002	User Manual released. Supports NetGuardian firmware versions up to 2.6E
December 14, 2004	NetGuardian DX User Manual (D-OC-UM04C.14100) released.
February 4, 2005	NetGuardian DX User Manual (D-OC-UM052.04300) released.
July 7, 2006	NetGuardian DX User Manual (D-OC-UM067.07400) released.
August 3, 2006	NetGuardian DX User Manual (D-OC-UM068.03410) released.
March 22, 2007	NetGuardian DX User Manual (D-OC-UM073.22101)
December 1, 2010	Added FCC Notice for Class A Device

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1 NetGuardian Expansion Overview

1.1 Summary of Features

- Low cost method of expansion to existing NetGuardian 832A units (supported by NetGuardian G2, G4, and others)
- Gives additional capacity over existing communications lines
- Helps conserve T/MonXM or IAM ports by reporting more alarms to the same address
- 48 ground activated discrete alarms per expansion
- 8 additional relay contact closures per expansion
- RS232 ports for easy daisy chaining between units
- LED indications of alarms and communications status
- Easy setup

DPS has kept the operation, pinout, and interfaces of the DX G4 model very similar to previous DX models. You will find the new DX G4 very interchangeable with existing DX equipment.

1.2 Introduction

The NetGuardian Expansion box is a low cost, self contained device that provides the NetGuardian 832A with an additional 48 ground activated discrete alarms per unit. With the capacity of adding up to 3 Net Guardian Expansions, at 48 alarms points per unit, an additional 144 discrete alarms to the NetGuardian 832A can be provided.

To make expansion a simpler and less expensive task, each unit is equipped with dual RS232 ports so that additional Expansions can be daisy chained to one another. In this way, currently deployed NetGuardian 832As can be easily expanded.

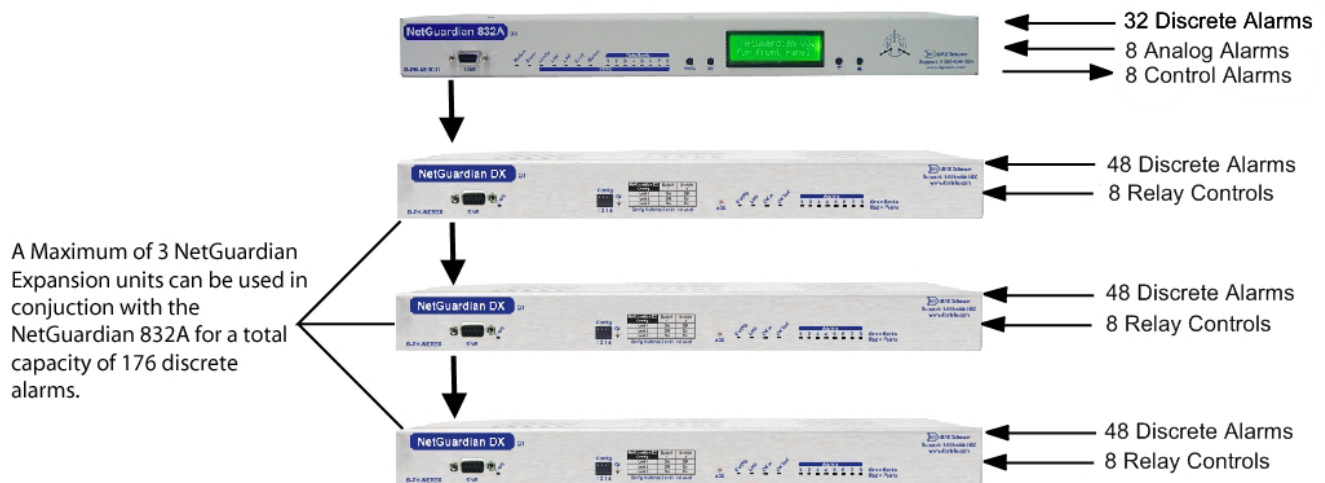
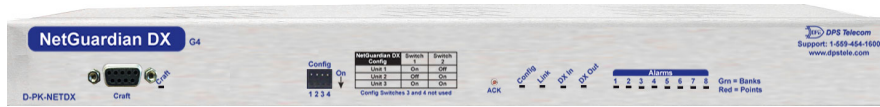


Fig. 1.2. NetGuardian Expansion functional diagram

2 Installation

2.1 Shipping List



NetGuardian Expansion D-PK-NETDX-12022.00001



User Manual
D-OC-UM10C.01200



RJ45 to RJ45 connection cable
D-PR-1028-10C-01 (1 per unit)
(for connection to
NetGuardian 832A G4)



DB9 to RJ45 connection cable
D-PR-1028-10A-01 (1 per unit)
(for connection to
legacy NetGuardian 832A)



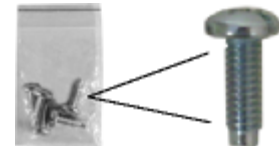
2, 23" Rack Ears



2, 19" Rack Ears



8 3/8" Ear Screws
8 Washers



4 Rack Screws



2 3/4 AMP fuse



Pads



Zip ties

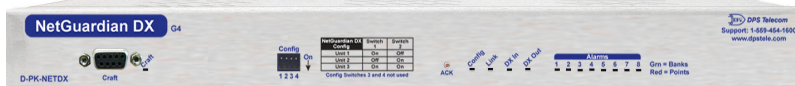
2.2 Optional Accessories



8' RJ45 to RJ45 connection cable
D-PR-1032-10B-08 (1 per unit)
(for connection to NetGuardian 832A G4)

Note: Please refer to Page 8 for pinout information

2.3 Specifications



Physical Dimensions:	2 3/4" H x 17 1/4" W x 9 1/4" D
Mounting:	19" or 23" rack with supplied ears
Operating temperature:	41° – 95°F (5° – 35°C)
Power input:	–4 to –56 VDC Optional wide range input: -20 to -70 VDC. DPS Part# D-PK-NETDX-12026.00001.
Fuse:	3/4 amp GMT
Current Draw:	250mA
Interfaces:	2 - RJ45 connectors for RS232 2 - 50 Pin connectors for discrete alarms and control relays
Relays:	8
Protocol:	DCPX
Minimum NetGuardian Firmware version required:	v1.5D

Options and Model numbers

Model number: D-PC-293-10A

FCC Compliance:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

2.4 Hardware Installation

2.4.1 Site Preparation

Tools needed:

- Phillips screwdriver
- Small standard No. 2 screwdriver
- Wire strippers/cutters



Precaution

- * *Pull fuses on source of -48VDC before connecting power.*
- * *Always observe electrostatic discharge (ESD) precautions.*

2.4.2 Installation Steps Overview

- Mount hardware:
Mount NetGuardian Expansion in the rack.
- Connect alarms leads.
- Connect power.
- Provision NetGuardian 832A for NetGuardian Expansion
- Review NetGuardian Expansion status LEDs.

2.4.3 Mounting Instructions

The NetGuardian Expansion can be mounted in a 19" or a "23" rack by using different rack ears for each size. Attach the appropriate size ears for your rack in the flush-mount locations shown in the figures below.



Fig. 2.3.3. The NetGuardian Expansion can be flush (top) or rear-mounted, as shown above.

Note: Rack ears can be flipped 180° for other mounting options not shown.

2.4.4 Power and Ground Connection



Fig. 2.3.4. Power connectors and fuses

The NetGuardian has two screw terminal barrier plug power connectors, located on the left side of the back panel. (See Figure 2.3.4.)

Before you connect a power supply to the NetGuardian Expansion, test the voltage of your power supply:

- Connect the black common lead of a voltmeter to the ground terminal of the battery, and connect the red lead of the voltmeter to the battery's -48 VDC terminal. The voltmeter should read **between -43 and -53 VDC**. If the reading is outside this range, test the power supply.

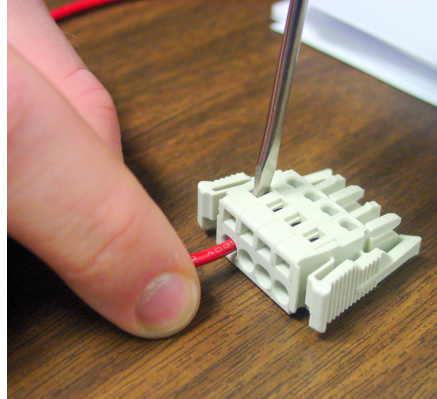
To connect the NetGuardian Expansion to a power supply, follow these steps:

1. Remove Fuse A and Fuse B from the back panel of the NetGuardian Expansion. **Do not reinsert the fuses until all connections to the unit have been made.**
2. Remove the power connector plug from Power Connector A. Note that the plug can be inserted into the power connector only one way — this ensures that the barrier plug can only be reinserted with the correct polarity. Note that the **-48 V terminal is on the left** and the **RTN terminal is on the right**.
3. Use the grounding lug to properly ground the unit.
4. Insert a **battery ground** into the power connector plug's **right terminal** and tighten the screw; then insert a **-48 VDC** line to the plug's **left terminal** and tighten its screw.
5. Push the power connector plug firmly back into the power connector. If the power feed is connected correctly, the LED by the connector will light **GREEN**. The LED by the power connector will be off if the power feed is reversed.
6. Repeat Steps 2–5 for Power Connector B.
7. Reinsert Fuse A and Fuse B to power the NetGuardian Expansion. The front panel LEDs will flash **RED** and **GREEN**.

To connect the NetGuardian to a power supply using a WAGO connector, follow these steps:

1. Remove the 2 fuses (**A& B**) from the back panel of the NetGuardian. **Do not reinsert the fuses until all connections to the unit have been made.**
2. Remove the WAGO power connector. Note that the plug can be inserted into the power connector only one way — this ensures that the barrier plug can only be reinserted with the correct polarity. Note that the **-48 V terminal is on Slots 1 and 3** and the **GND terminal is on Slots 2 and 4**.

3. Use the grounding lug to properly ground the unit.
4. Insert a **battery ground** into the power connector plug's **slots 2 and 4** by pushing down on top of the appropriate slot of the WAGO connector with a screwdriver and inserting the wire into the slot, then releasing the screwdriver. Insert a **–48 VDC** line to the plug's **slots 1 and 3** using the same method as before.



Inserting a -48 VDC Line into Slot 1 of WAGO Connector

5. Push the power connector plug firmly back into the power connector. If the power feed is connected correctly, the LED by the connector will light **GREEN**. If the polarity of the power feed is reversed, the LED will not illuminate.
6. Reinsert the fuses to power the NetGuardian. The front panel LEDs will flash **RED** and **GREEN**.

2.4.5 Communication Lines

1. Connect one end of the RJ45-RJ45 cable to reach through port number 7 (if NetGuardian 240T, use "serial" port of 240T) located on the NetGuardian back panel.
2. Connect the other end of the RJ45-RJ45 cable to the "DX In" port of the NetGuardian Expansion (See Figure 2.3.5 below).

Note: If interfacing to the legacy NetGuardian G2 model, then use the supplied DB9-to-RJ45 cable instead.

If additional NetGuardian Expansions are to be installed:

3. Connect one end of another RJ45-RJ45 cable to the "DX Out" port in the first NetGuardian Expansion.
4. Connect the other end of that RJ45-RJ45 cable to the "DX In" port of the second NetGuardian Expansion.
5. To connect a third NetGuardian Expansion, repeat steps 3 and 4.

Note: The "DX IN" and "DX OUT" ports as well as the NetGuardian's Data Ports are DCE type ports.

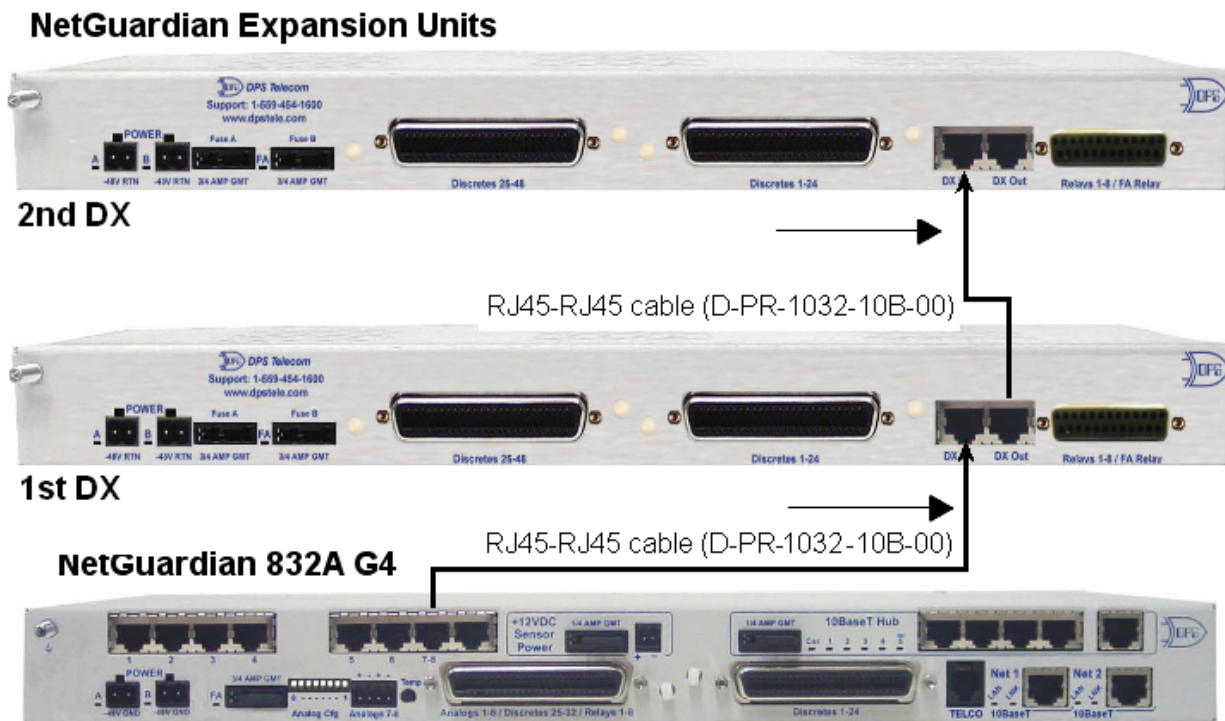


Fig. 2.3.5. NetGuardian Expansion with communications lines

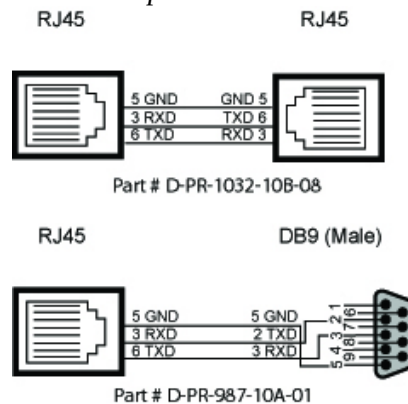


Fig. 2.3.5. RJ45 Expansion Connection crossover cable pinout

Note: Connect the NetGuardian 240T RS232 serial port to the DX In port of the NetGuardian Expansion Unit.

2.4.5.1 NetGuardian Expansion Addressing

To distinguish NetGuardian Expansion Shelf 1 (and Shelves 2 and 3 if applicable), a DIP switch address setting is used. The DIP switches use binary settings and are addressed as 1, 2, and 3 respectively. To verify the shelf address, push and hold the ACK button on the front panel. The LEDs will indicate the shelf address (i.e. either 1, 2, or 3).

NetGuardian Expansion	DIP switch position			
	1	2	3 (Not used)	4 (Not used)
Shelf 1	On	Off	Off	Off
Shelf 2 (if applicable)	Off	On	Off	Off
Shelf 3 (if applicable)	On	On	Off	Off

Table 2.3.5.1. NetGuardian Expansion shelf addressing.

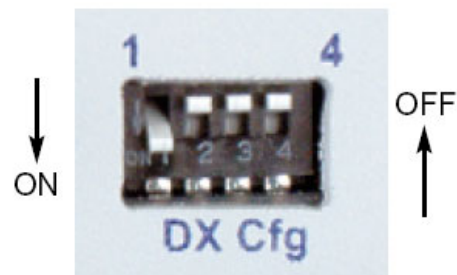


Fig. 2.3.5.1. Shelf addressing DIP switch close-up.

Note: If you only have one NetGuardian Expansion, it must be shelf 1. If a second NetGuardian Expansion unit is used, it must be shelf 2, etc.

2.4.6 Discrete I/O Lines (alarms)

Discrete alarm points connected to the NetGuardian Expansion units are essentially single-lead signals referenced to ground. The B-side of each alarm point is internally wired to ground, so either a single wire bringing a contact to ground or a dry closure with the second lead connected to the B-side will be sensed as an alarm signal.

Discretes 1-24

	B	A		B	A
ALM 1	1	26	ALM 13	14	38
ALM 2	2	27	ALM 14	14	39
ALM 3	3	28	ALM 15	15	40
ALM 4	4	29	ALM 16	16	41
ALM 5	5	30	ALM 17	17	42
ALM 6	6	31	ALM 18	18	43
ALM 7	7	32	ALM 19	19	44
ALM 8	8	33	ALM 20	20	45
ALM 9	9	34	ALM 21	21	46
ALM 10	10	35	ALM 22	22	47
ALM 11	11	36	ALM 23	23	48
ALM 12	12	37	ALM 24	24	49

Table 2.3.6. NetGuardian Expansion discrete alarm points (continued on next page)

Discretes 25-48

	B	A		B	A
ALM 25	1	26	ALM 37	14	38
ALM 26	2	27	ALM 38	14	39
ALM 27	3	28	ALM 39	15	40
ALM 28	4	29	ALM 40	16	41
ALM 29	5	30	ALM 41	17	42
ALM 30	6	31	ALM 42	18	43
ALM 31	7	32	ALM 43	19	44
ALM 32	8	33	ALM 44	20	45
ALM 33	9	34	ALM 45	21	46
ALM 34	10	35	ALM 46	22	47
ALM 35	11	36	ALM 47	23	48
ALM 36	12	37	ALM 48	24	49

2.4.7 Fuse Alarm Pins and Control Relay Pinouts

Fuse Alarm

The fuse alarm relay is Normally Open. If the fuse blows, the fuse alarm (FA) LED will light and the fuse alarm relay (FA RLY) will de-energize (close). The relay is found on pins 13 and 25 of the DB 25 connector on the back panel. Connect these pins to other alarm monitoring equipment to give visibility of an equipment failure (see Figure 2.3.7 below). Refer to Table 2.3.7 for pinout information.

Control Relay

Controls can be used for starting or stopping equipment, unlocking doors, and other functions. Connect control relays to the 25-pin connector on the back panel. Refer to Table 2.3.7 for control relay connection pinouts.

The default setting for the relays is Normally Open (N/O). To change the settings to Normally Closed (N/C), you must reset the circuit board jumpers. For instructions on changing jumper settings, see Section 2.3.7.1.

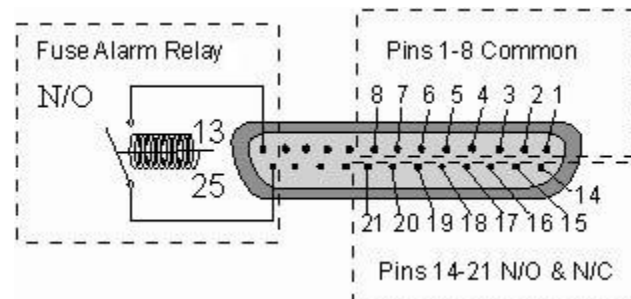


Fig. 2.3.7. The Fuse Alarm relay is found on pins 13 and 25, and the Control Relay pins are numbers 1-8

Male DB25 Pin	Description
1	Relay 1 Common
2	Relay 2 Common
3	Relay 3 Common
4	Relay 4 Common
5	Relay 5 Common
6	Relay 6 Common
7	Relay 7 Common
8	Relay 8 Common
13	Fuse Alarm Relay Pin 1
14	Relay 1 (N/C or N/O)*
15	Relay 2 (N/C or N/O)*
16	Relay 3 (N/C or N/O)*
17	Relay 4 (N/C or N/O)*
18	Relay 5 (N/C or N/O)*
19	Relay 6 (N/C or N/O)*
20	Relay 7 (N/C or N/O)*
21	Relay 8 (N/C or N/O)*
25	Fuse Alarm Relay Pin 2

Table 2.3.7. Alarm and control relays pinout information

* This pin is user selectable by an internal jumper--the default is always Normally Open.

2.4.7.1 Changing Jumper Options

You can change the settings for control relays by resetting the jumpers on the NetGuardian's circuit board. To open the unit and expose the circuit board, remove the screws from the top of the NetGuardian and lift the top cover off. Figure 2.3.7.1 shows the circuit board and the location of the adjustable jumpers.

By default, all the adjustable jumpers are open, except for the speaker jumper. For control relay jumpers, the open position corresponds to normally open operation, and the closed position corresponds to normally closed operation.

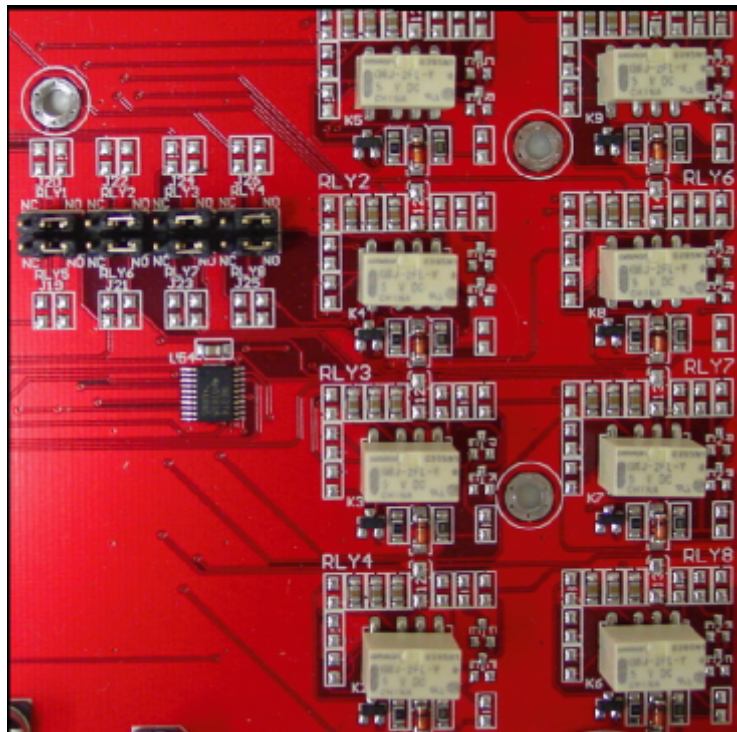


Fig. 2.3.7.1. Control Relays on the NetGuardian DX circuit board

2.4.8 Power-up

Now that all alarm and communications wiring is complete, power up the unit by installing Fuse A and Fuse B in the back panel.

2.5 NGEEdit Configuration

NGEdit is the DPS-recommended way for configuring points on the NetGuardian DX. You can refer to the NGEEdit Help File or the NGEEdit User Manual for full instructions. The following is to show you the screens you would use to configure the NetGuardian DX.

NGEditG4 - [NetGuardian]

Device Edit Connect Help

System Login Ports SNMP Filter IPA Notification Devices Alarms Point Groups Ping Targets Analogs Event Qual Relays Timers Time Settings PPP Configuration BAC

Ethernet Port (NET 1)

Unit Address: 255.255.255.255
Subnet Mask: 255.255.255.0
Gateway: 255.255.255.255

Ethernet Port (NET 2)

IP Address: 255.255.255.255
Subnet Mask: 255.255.255.0
Gateway: 255.255.255.255

Global Ethernet Options

DNS Address: 255.255.255.255
Proxy Base: 3000
Enable DHCP: ☐
Base URL:

Modem

Ring Count: 1
Answer Init:
Dial Init:

Options

NGDdx Units: 0-NONE
GLD: 0-NONE

Craft Port

Baud Rate: 115200
Word Format: 8N1

ID	Description	Options	WFmt	CRX In	CRX Out	RTS Head	RTS Tail	Port Type	Pool
1		115200	8N1	Ignore	Ignore	0	0	Off	No
2		115200	8N1	Ignore	Ignore	0	0	Off	No
3		115200	8N1	Ignore	Ignore	0	0	Off	No
4		115200	8N1	Ignore	Ignore	0	0	Off	No
5		115200	8N1	Ignore	Ignore	0	0	Off	No
6		115200	8N1	Ignore	Ignore	0	0	Off	No
7		115200	8N1	Ignore	Ignore	0	0	Off	No
8		115200	8N1	Ignore	Ignore	0	0	Off	No

Save Close

Click the Ports tab to access the Options drop-down menu

NGEditG4 - [NetGuardian]

Device Edit Connect Help

System Login Ports SNMP Filter IPA Notification Devices Alarms Point Groups Ping Targets Analogs Event Qual Relays Timers Time Settings PPP Configuration BAC

Expansion 1 Alarms

System Base Expansion 1

ID	Description	Polarity	Trap	Prt Notify	Sec Notify	Group	Qual
1		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
2		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
3		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
4		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
5		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
6		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
7		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
8		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
9		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
10		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
11		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
12		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
13		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
14		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
15		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
16		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
17		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
18		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
19		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
20		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
21		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None
22		Normal ▼	Yes ▼	None ▼	None ▼	Group 1 ▼	None

Save Close

Configure Your Selected DX with the Alarms Tab.

- When you click on the Expansion tab in the Alarms screen, enter the appropriate event in the Description field.

2.6 Web Browser Configuration

The NetGuardian offers Web Browser configuration for easy and convenient setup of the discrete alarms. The NetGuardian supports Internet Explorer versions 4.0 and up and Netscape Navigator versions 4.7 and up.

2.6.1 Logon

1. After connecting to the NetGuardian's IP address, enter your password and click Submit (factory default password is "dpstelecom"). (See figure 2.5.1)
2. In the main menu, there is a Monitor menu button and an Edit menu button. Most of the software configuration will occur in the Edit menu.

The screenshot shows the 'NetGuardian-G4 Logon' interface. It has a red header bar with the title. Below it, there is a 'Password:' label, a text input field containing 'dpstelecom', and a 'submit' button. At the bottom, there is the 'DPS Telecom' logo.

Fig. 2.5.1. Enter your password to configure and monitor your NetGuardian's discrete alarms using the Web Browser feature

2.6.2 Configuring the Expansion Unit

When you first logon, you will see the Alarm Summary window in Monitor Mode.

NetGuardian-G4

[Refresh](#) | [Logout](#) | [Upgrade](#) | [Help](#)

Monitor

Summary

Base Alarms

Ping Targets

Analog

System Alarms

Accum. Time

Controls

Exp.1 Controls

Exp.1 Alarms

Event Log

Port Transmit
Select ▼

Port Receive
Select ▼

NetGuardian-G4 v4.1K.0343

Edit

Alarm Summary	
Type	Active Alarms
Base Alarms	0
Ping Targets	0
Analog	0
System Alarms	1
Exp.1 Alarms	1
Summary by Group	
Name	Active Alarms
Group 1	2
Group 2	0
Group 3	0
Group 4	0
Group 5	0
Group 6	0
Group 7	0
Group 8	0

Alarm Summary Window in Monitor Mode

To configure your Expansion Unit, click on the Edit link on the bottom left-hand corner of the Alarm Summary window.

1. Once you are in the Edit screen, click on 'Edit Ports'
2. Once in the Edit Ports screen, use the NGDdx drop-down menu in the Options section to select how many DX units you will be working with. For this example, we will choose 1 DX unit.

Options

NGDdx: 1-DX unit

GLD or BSU: 0-NONE

Submit Data

Select Expansion Units from the NGDdx drop-down menu in the Options section

3. Click Submit Data
4. At this point, refresh the browser. You will see 2 new entries in the EDIT menu: Exp 1 Controls and Exp 1 Alarms.



NetGuardian-G4

[Refresh](#) | [Logout](#) | [Upgrade](#) | [Help](#)

Monitor

NetGuardian-G4 v4.1K0343

Edit

- System
- Login
- Ethernet
- Ports
- Filter IPA
- SNMP
- Notification
- Point Groups
- Base Alarms
- System Alarms
- Accum. Timer
- Ping Targets
- Analogs
- Controls
- Exp.1 Controls
- Exp.1 Alarms
- Event Qual
- Select
- Timer
- Date and Time
- PPP
- BAC
- Camera
- Alarm Sync
- Reboot
- NVRam

Ports

Craft

Baud: 9600

WFmt: 8,N,1

Modem

Ring Count: 1

Answer Init:

Dial Init:

Data Ports

ID	Description	Baud	WFmt	CR/LF Mode		RTS Times		Type	Pool
				In	Out	Head	Tail		
1		115200	8,N,1	Ignore	Ignore	0	0	OFF	N
2		115200	8,N,1	Ignore	Ignore	0	0	OFF	N
3		115200	8,N,1	Ignore	Ignore	0	0	OFF	N
4		115200	8,N,1	Ignore	Ignore	0	0	OFF	N
5		115200	8,N,1	Ignore	Ignore	0	0	OFF	N
6		115200	8,N,1	Ignore	Ignore	0	0	OFF	N
7	NGDdx Net	2400	8,N,1	Ignore	Ignore	0	0	OFF	N
8		115200	8,N,1	Ignore	Ignore	0	0	OFF	N

Options

NGDdx: 1-DX unit

GLD or BSU: 0 (Disabled)

Submit Data

There are 2 new entries in the Edit Menu after you select a DX in the Options Menu

2.6.3 Setting Up An Expansion Alarm

To configure an alarm for your expansion unit simply do the following:

1. Click on the **Exp 1 Alarms** link in the Edit Menu



NetGuardian-G4

[Refresh](#) | [Logout](#) | [Upgrade](#) | [Help](#)

Monitor

NetGuardian-G4 v4.1K0343

Edit

System

Login

Ethernet

Ports

Filter IPAs

SNMP

Notification

Point Groups

Base Alarms

System Alarms

Accum. Timer

Ping Targets

Analogues

Controls

Exp.1 Controls

Exp.1 Alarms

Event Qual
Select ▼

Timers

Date and Time

PPP

BAC

Camera

Alarm Sync

Reboot

NVRam

Exp.1 Alarms							
ID	Description	Polarity	Trap	Pagers		Group	Qual
				primary	secondary		
1		Normal ▼	☐	0	0	1	None
2		Normal ▼	☐	0	0	1	None
3		Normal ▼	☐	0	0	1	None
4		Normal ▼	☐	0	0	1	None
5		Normal ▼	☐	0	0	1	None
6		Normal ▼	☐	0	0	1	None
7		Normal ▼	☐	0	0	1	None
8		Normal ▼	☐	0	0	1	None
9		Normal ▼	☐	0	0	1	None
10		Normal ▼	☐	0	0	1	None
11		Normal ▼	☐	0	0	1	None
12		Normal ▼	☐	0	0	1	None
13		Normal ▼	☐	0	0	1	None
14		Normal ▼	☐	0	0	1	None
15		Normal ▼	☐	0	0	1	None
16		Normal ▼	☐	0	0	1	None
17		Normal ▼	☐	0	0	1	None
18		Normal ▼	☐	0	0	1	None
19		Normal ▼	☐	0	0	1	None
20		Normal ▼	☐	0	0	1	None
21		Normal ▼	☐	0	0	1	None
22		Normal ▼	☐	0	0	1	None

The Exp 1. Alarms Window

2. Enter the desired alarm description and values
3. Click Submit Data
4. Exit to 'Monitor Mode' by clicking on the Monitor link in the upper-left hand corner of the screen.

5. The Alarm Summary window will show the newly-configured Exp 1. alarm.



NetGuardian-G4

[Refresh](#) | [Logout](#) | [Upgrade](#) | [Help](#)

Monitor
Summary
Base Alarms
Ping Targets
Analog
System Alarms
Accum. Timer
Controls
Exp.1 Controls
Exp.1 Alarms
Event Log
Port Transmit Select
Port Receive Select

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Edit

Alarm Summary	
Type	Active Alarms
Base Alarms	1
Ping Targets	0
Analog	0
System Alarms	1
Exp.1 Alarms	1
Summary by Group	
Name	Active Alarms
Group 1	3
Group 2	0
Group 3	0
Group 4	0
Group 5	0
Group 6	0
Group 7	0
Group 8	0

The Alarm Summary Window showing a newly-active Exp.1 Alarm

6. Click on the Exp.1 Alarms link to view your alarm information.

2.6.4 Setting Up a Relay

1. Click on the Edit link in the bottom left-hand corner of the Alarm Summary Window.
2. Once in the Edit screen, click 'Exp 1 Controls'
3. Enter the description for the relay and click Submit Data



NetGuardian-G4

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Monitor

NetGuardian-G4 v4.1K0343

Edit

[System](#)
[Logon](#)
[Ethernet](#)
[Ports](#)
[Filter IPA](#)
[SNMP](#)
[Notification](#)
[Point Groups](#)
[Base Alarms](#)
[System Alarms](#)
[Accum. Timer](#)
[Ping Targets](#)
[Analog](#)
[Controls](#)
[Exp.1 Controls](#)
[Exp.1 Alarms](#)

Event Qual

Select ▼

[Timers](#)
[Date and Time](#)
[PPP](#)
[BAC](#)
[Camera](#)
[Alarm Sync](#)
[Reboot](#)
[NVRam](#)

Exp.1 Controls					
ID	Description	Test	Energize State	Trap	Group
1		Parse	n/a	☐	1
2		Parse	n/a	☐	1
3		Parse	n/a	☐	1
4		Parse	n/a	☐	1
5		Parse	n/a	☐	1
6		Parse	n/a	☐	1
7		Parse	n/a	☐	1
8		Parse	n/a	☐	1

Enter Description Information to Configure Your Relay

4. You will see a 'Successfully Submitted' dialog box. Click OK.
5. Return to 'Monitor Mode' by clicking the Monitor link.
6. Click on 'Exp.1 Controls'

7. Select the OPR option under the 'State' drop-down menu.

Exp.1 Controls			
ID	Description	Mode	State
1	RED	Normal	Rls
2		Normal	Opr
3		Normal	Rls
4		Normal	Mon
5		Normal	Rls
6		Normal	Rls
7		Normal	Rls
8		Normal	Rls

Submit Data

To Activate The Relay, Select OPR

8. You should hear a clicking noise coming from your Expansion Unit confirming the relay.

2.6.5 Monitoring the Expansion Alarm Points

Now that the NetGuardian points have been provisioned with all of the appropriate information, they may be monitored (this is helpful to verify the installation).

Connect PC to craft port on NetGuardian 832A, **NOT** the NetGuardian DX.

1. From the main menu, select C)onfig, then M)onitor, then A)larms, then E)xpansions.
2. Enter the display number that you would like to monitor (12=Expansion shelf 1, 14=shelf 2, and 16=shelf 3; see section 3.2 for display mapping details).
3. The list of alarms and their status will be displayed, 16 alarms at a time. Press any key to scroll to the next group of 16 items.
4. Press ESC to exit the monitoring list.

```

s(Y)stem L)ogin P)orts pa(G)ers A)larms R)elays
a(N)alog s p(I)ng info T)imers D)ate/time n(V)ram (ESC) ? A

B)ase E)xpansions (ESC) ? E

Active Displays : 12, 14, 16

Display Number : 12

ID      Description      Status
 1      DOOR ALARM      Alarm
 2      COMMERCIAL POWER OUT      Clear
 3      UPS GNRTR RUNNING      Clear
 4      RECTIFIER 1      Clear
 5      RECTIFIER 2      Clear
 6      ICY CONDITION      Clear
 7      GE2 DE-ICER 1 ON      Clear
 8      GE2 DE-ICER 2 ON      Clear
 9      GE2 DE-ICER 3 ON      Clear
10      GE2 DE-ICER 4 ON      Clear
11      Clear
12      Clear
13      Clear
14      Clear
15      Clear
16      Clear
ESC to exit Any key to continue

```

Monitor the Expansion points from the M)onitor, E)xpansions menu

3 Operation

3.1 Front Panel Functions

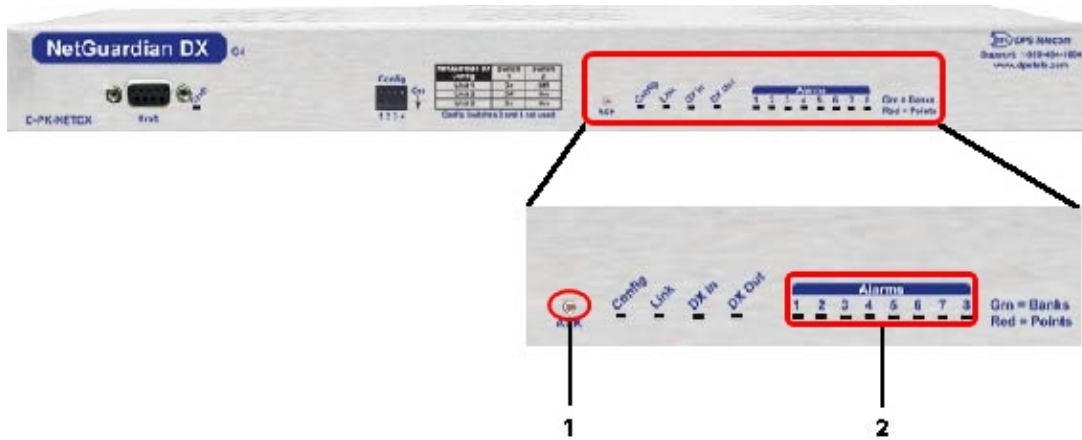


Fig. 3.1. The front panel displays alarm and communication status.

Label Descriptions

1. ACK button. The ACK button will acknowledge any new alarms (change of state (COS) alarms). It will also cause the shelf address (determined by the back panel DIP switch) to be displayed by LEDs 1-3 when it is held down.

2. Front panel LEDs. See Table 3.1 for LED indications.

LED	STATUS	DESCRIPTION
CFG	Flashing Red	Invalid Shelf Address, check front panel DIP switch setting
	Flashing Green	Shelf Address set correctly
LNK	Solid Green	
PRI	Flashing Green/Red	Data Transmit/Receive on primary RS232 port (DX IN)
SEC	Flashing Green/Red	Data Transmit/Receive on secondary RS232 port (DX OUT)
Alarms 1-8	Green=Banks	A green flash indicates the point bank number (1-6). A point bank is comprised of 8 alarm points.
	Red=Points	A red flash after the green point bank number flash indicates which of the 8 alarms in that point bank are in an alarmed state (see table below). Note: The Expansion alarm points are also displayed on the NetGuardian's LCD.

Table 3.1. NetGuardian Expansion LED indications (above), and alarm point designations per point bank (below)

Note: The silkscreen designations "DX IN" and "DX OUT" do not indicate communication direction.

Point Bank	Alarm Points
1	1-8
2	9-16
3	17-24
4	24-32
5	32-40
6	41-48

3.2 Display Mapping

Display numbers 1 through 11 in Table 3.2A correspond to the NetGuardian 832A, and Display numbers 12 through 17 (in bold) correspond to the NetGuardian Expansion unit.

Display	Description
1	Alarms 1-32
2	Ping Table
3	Analog Channel 1
4	Analog Channel 2
5	Analog Channel 3
6	Analog Channel 4
7	Analog Channel 5
8	Analog Channel 6
9	Analog Channel 7
10	Analog Channel 8
11	Relays/Housekeeping (See NetGuardian 832A manual for complete point descriptions and table below)
12	NetGuardian Expansion 1 Alarms 1-48
12	NetGuardian 480 (as DX) Alarms 1-64
13	NetGuardian Expansion 1 Relays 1-8 or NetGuardian 480 (as DX) Relays 1-4
13	NetGuardian 480 (as DX) Alarms 65-80
14	NetGuardian Expansion 2 Alarms 1-48
15	NetGuardian Expansion 2 Relays 1-8
16	NetGuardian Expansion 3 Alarms 1-48
17	NetGuardian Expansion 3 Relays 1-8

Table 3.2.A. NetGuardian 832A with NetGuardian Expansion Display Mapping

Display 11 Point	Description
56	NGDdx 1 Fail (Expansion shelf 1 communication link failure)
57	NGDdx 2 Fail (Expansion shelf 2 communication link failure)
58	NGDdx 3 Fail (Expansion shelf 3 communication link failure)

Table 3.2.B. NetGuardian housekeeping display 11 alarm points for Expansion communication link failures

4 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

1. Check the DPS Telecom website.

You will find answers to many common questions on the DPS Telecom website, at <http://www.dpstelecom.com/support/>. Look here first for a fast solution to your problem.

2. Prepare relevant information.

Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

3. Have access to troubled equipment.

Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

4. Call during Customer Support hours.

Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

Emergency Assistance: Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.

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